



FEDERAL SECURITY AGENCY
PUBLIC HEALTH SERVICE

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IN REPLYING, ADDRESS THE
PUBLIC HEALTH SERVICE

REFER TO:

Tuberculosis Research Laboratory,
411 East 69th St., New York 21, N. Y.

May 15, 1952.

Dr. Joshua Lederberg,
Dept. of Genetics,
The University of Wisconsin,
College of Agriculture,
Madison 6, Wisconsin.

Dear Joshua:

I assume that W-1926 which you recently sent Werner was one of your "monsters". For a while I was excited by what looked like a requirement for a new factor in yeast extract but it turns out that this mutant, when its threonine requirement is satisfied, responds slowly to guanine or diaminopurine, and even more slowly to hypoxanthine or xanthine. It readily gives rise to secondaries which respond rapidly to any of these four compounds. This bug has two remarkable features. It does not respond at all to adenine and it is the first coliform to respond decently to diaminopurine, which has long been suspected but not proved to be an intermediate in purine synthesis. I don't think this curious pattern of response throws light on any biosynthetic paths, and it probably involves some internal inhibitions which I don't care to look into at this time.

I have finally decided to bury the data on the B₁₂/methionine *What?* Pseudomonas strain you sent last year. Its response was much more irregular than the coli mutants, possibly because this requirement could be demonstrated only at temperatures around 37°. I suppose this unwholesome temperature probably has something to do with the irregularity of response.

I was sorry to miss you and Esther at the Boston meetings. I am sure you will be pleased to hear that Norton presented his stuff very well. It is indeed a pretty story.


We have finally isolated mutants of your W-677 with reasonable degrees of resistance to different analogues of POB. The degree of resistance isn't nearly what one can obtain with streptomycin, so the scoring would be tricky, but I think it might be possible with these strains to see how these types of resistants behave in a heterozygote. I have also prepared some sulfonamide resistant mutants in this strain

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with the thought that you might care to see whether sulfonamide resistance is dominant or recessive. I would be glad to send these strains along at any time.

Yours,

A handwritten signature in cursive script, appearing to read "Bernard D. Davis".

Bernard D. Davis

BDD/hl